

Developing Middle School Students' AI Literacy

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Abstract

In this experience report, we describe an AI summer workshop designed to prepare middle school students to become informed citizens and critical consumers of AI technology and to develop their foundational knowledge and skills to support future endeavors as AI-empowered workers. The workshop featured the 30-hour "Developing AI Literacy" or DAILy curriculum that is grounded in literature on child development, ethics education, and career development. The participants in the workshop were students between the ages of 10 and 14; 87% were from underrepresented groups in STEM and Computing. In this paper we describe the online curriculum, its implementation during synchronous online workshop sessions in summer of 2020, and preliminary findings on student outcomes. We reflect on the successes and lessons we learned in terms of supporting students' engagement and conceptual learning of AI, shifting attitudes toward AI, and fostering conceptions of future selves as AI-enabled workers. We conclude with discussions of the affordances and barriers to bringing AI education to students from underrepresented groups in STEM and Computing.